

Notice of Allowability

Application No.

10/664,110

Examiner

Terry L. Englund

Applicant(s)

NAKAMURA, YOSHIAKI

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amdt (Dec 9, 2005) and Interview (Dec 15, 2005).
2. ☒ The allowed claim(s) is/are 1-19.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

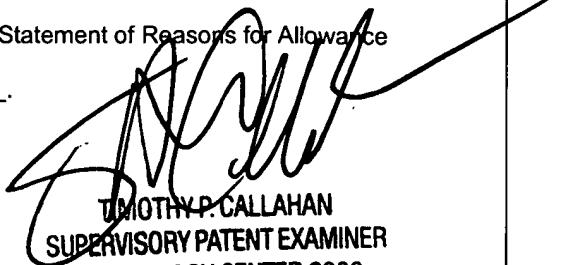
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 12152005.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


TIMOTHY P. CALLAHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to the applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with the applicant's representative Norman P. Soloway (Reg. No. 24,315) on Dec 15, 2005.

The application has been amended as follows:

Claim 1, line 4: changed "resisters" to --resistors--;

Claim 2, line 2: changed "an" to --a--;

Claim 6, lines 5-6: changed "at least one of said third transistors" to --said at least one
third transistor--;

line 7: changed "groups" to --group--;

line 10: changed "one resistor" to --another resistor--;

line 13: changed "one resistor" to --an additional resistor--;

Claim 7, line 6: changed "one resistor" to --another resistor--;

Claim 8, line 5: changed "groups" to --group--;

line 8: changed "groups" to --group--;

line 11: changed "a series of" to --series connected resistors within--;

lines 14-15: changed "between said series of" to --within--;

line 17: changed "one resistor" to --another resistor--;

Claim 15, line 11: changed "groups" to --group--;

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line 17: changed “said output current” to --a resulting output current from said
output terminal--;

Claim 17, lines 5-6: changed “at least one of said third transistors” to --said at least one
third transistor--;

line 7: changed “groups” to --group--;

line 10: changed “one resistor” to --another resistor--;

line 13: changed “one resistor” to --an additional resistor--;

Claim 18, line 6: changed “one resistor” to --another resistor--;

Claim 19, line 5: changed “groups” to --group--;

line 8: changed “groups” to --group--;

lines 10- 11: changed “a series of” to --series connected resistors within--;

lines 14-15: changed “between said series of” to --within--;

line 17: changed “one resistor” to --another resistor--; and

Abstract, line 6: changed “group” to --groups--.

An inadvertent oversight was corrected within each of claims 1 and 2. The phrase on lines 5-6 of each of claims 6 and 17 was changed to more clearly relate it back to “at least one third transistor” cited on line 3, thus minimizing possible confusion with respect to how a plurality of third transistors (i.e. “said third transistors” on line 6) would relate to the possibility there might be only a single third transistor (i.e. “at least one third transistor” on line 3). After the addition of “group of first transistors and said” to some claims by the applicant’s amendment, the corresponding “groups of second transistors” was inadvertently left with a plural. This oversight has now been corrected within each of claims 6, 8, 15, 17, and 19. The “one resistor”

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phrases on both lines 10 and 13 of claim 6 were modified to help distinguish those resistors from one another, and from the “one resistor” cited on line 3 of the same claim. [For example, using the applicant’s Fig. 2 as a reference, the resistor on line 3 of claim 6 relates to resistor 61; line 10’s resistor relates to resistor 65; and line 13’s resistor relates to resistor 64, wherein these resistors are part of the plurality of resistors cited in claim 5, which includes all of the resistors shown in Fig. 2. Also, the first and second subsets of said plurality of resistors are understood as relating to resistors 52-53 and 72-73. Therefore, one of ordinary skill in the art would understand that the various resistors (or subsets) recited within the claims (e.g. claims 5 and 6) are separate, distinct resistors (or subsets) with respect to one another.] Claims 7, 8 (line 17), 18, and 19 (line 17) were also changed to more clearly distinguish the “one resistor” from other resistors (e.g. “pair of resistors” or “subset”) of said plurality. The changes to lines 10-11 and 14-15 of each of claims 8 and 19 help to clarify how the “series” relates to the fourth subset, and thus minimize possible confusion. [For example, before the above changes were made, “a series of a fourth subset” on line 11 did not clarify what the series actually related to (e.g. perhaps a series of resistors, or possibly a series of fourth subset(s)); and “between said series” implied the node was formed between the “series” and something else that was not recited.] Although lines 12-16 of claim 15 refer to currents, with respect to the output terminal, “said output current” on line 17 had not been clearly identified. Therefore, line 17 was amended to help distinguish the current at the output terminal from the currents cited on lines 12 and 14-15 of claim 15. The Abstract was amended to ensure the cited singular “group” would correspond to its preceding “first and second” phrase.

Response to Amendment/Drawing

The amendment and drawing submitted on Dec 9, 2005 have been reviewed and considered with the following results:

The annotated/replaced Fig. 1 overcame its objection described in the previous Office Action. Therefore, Fig. 1 has been approved by the examiner, and the objection has been withdrawn.

The amended title, abstract, and paragraphs overcame their respective objections, which have also been withdrawn. Although a minor oversight was found within the amended abstract, that was addressed by the Examiner's Amendment described above.

The amended claims overcame the objections to claims 1-8, and 17 as described in the previous Office Action, and they have been withdrawn. However, when reconsidering the claims, various other concerns were noted. These were all addressed/corrected by the Examiner's Amendment.

The amended claims, and/or associated comments, overcame all but one of the rejections of claims 2-8, and 11-19 under 35 U.S.C. 112. However, the rejection of claim 15, with respect to "said output current", was not overcome. Therefore, all of the rejections under 35 U.S.C. 112 that were described in the previous Office Action have been withdrawn, except for the one rejection related to claim 15. Besides that rejection, some of the amended claim sections created new 35 U.S.C. 112 type concerns. Since none of these concerns appeared critical to the basic limitations claimed, the applicant's representative was contacted and the various concerns were discussed. Wording that satisfactorily addressed/corrected all of these known concerns was

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approved, and the above Examiner's Amendment was completed. Therefore, the previous rejection of claim 15 has also been withdrawn.

There is now no known objection, or rejection, remaining within the present application.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance:

None of the prior art references reviewed and considered shows or discloses the current circuit as recited within independent claims 1 and 5, or the active filter circuit as recited within independent claims 9 and 15, wherein each circuit includes a plurality of resistors formed on a semiconductor substrate, the output terminal relates to specific currents, and the resistance (i.e. in claims 1 and 9), or the substrate (i.e. in claims 5 and 15), has uniform resistance variations. More specifically, none of the references clearly shows or discloses: 1) a first current source producing a constant current at the output terminal, regardless of resistance variations, and a second current source producing a second current, varying inversely with the resistance variations, at the output terminal as recited within each of claims 1 and 9; or 2) a constant current source producing a constant current at the output terminal, and current drawing circuitry drawing a current, inversely variable with the resistance variations, at the output terminal as recited within claims 5 and 15. Claims 2-4, 6-8, 10-14, and 16-19 depends on claims 1, 5, 9, and 15, respectively. Since there is no motivation to modify or combine any prior art reference(s) to ensure the specific currents and resistance variation limitations are met, the claims are deemed patentably distinct over the prior art of record.

Claims 1-19 are allowed.

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Any comments considered necessary by the applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication, or previous communications, from the examiner should be directed to Terry L. Englund whose telephone number is (571) 272-1743. The examiner can normally be reached Monday-Friday from 7 AM to 3 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan, can be reached on (571) 272-1740.

The new central official fax number is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1562.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Terry L. Englund

16 December 2005

AMENDMENTS TO THE DRAWINGS:

The attached sheet of drawings includes an amendment to FIG. 1. This sheet replaces the original sheet. A marked copy of amended FIG. 1 is also enclosed.

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